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# State of Michigan Occupational Employment and Wage Estimates

Selected Occupations for the Manufacturing Sector

*April 2013*

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*Provided by*

**Workforce Development Agency, State of Michigan**  
**Manufacturing Cluster**



## Occupational Employment and Wage Estimates

The table on the following pages presents employment and wage estimates for selected occupations typically found in manufacturing establishments across the State of Michigan. It serves as a guide on market earnings in the local area for manufacturing companies. Geographic coverage includes all counties of the State of Michigan. The data are current as of January 2013.

Since the data come from a survey encompassing all industries in the economy, some of the occupations covered here may be found in non-manufacturing firms. In addition, not all of the occupations included in the survey are presented in this bulletin: data for hundreds more exist. Only wage and salary workers are covered by the survey (the self-employed are excluded).

## Recent Trends in Wages

According to the U.S. Bureau of Labor Statistics, wage costs for manufacturing workers nationally increased 1.9 percent for the 12-month period ending December 2012, essentially unchanged from the December 2011 increase of 1.8 percent. This was little different from the trends for the private sector overall – 1.7 percent for December 2012 and 1.6 percent for December 2011. For more information search on “employment cost index news release text.”

The following “key” describes the information appearing in the statistical tables presented later in this bulletin –

SOC Code Number	Occupation Title	Employment (1)	Wage Estimates		
			10 <sup>th</sup> Percentile Earnings	Median Earnings	90 <sup>th</sup> Percentile Earnings
The Standard Occupational Classification (SOC) code number helps you locate a specific job description – see end of report.	The associated title for the Standard Occupational Classification (SOC) code appearing in the left column.	An estimate of the number of people employed in the occupation as of January 2013.	Wages typically paid to entry workers and those in small companies.	Average wages paid to workers in the occupation in Michigan.	Wages typically paid to experienced workers and to workers in large companies.

## Additional Notes

It's important to remember that wages for a specific occupation can vary based on experience, the education and skills of individual workers, and a host of other factors. The lower end of the wage scale is typically a proxy for starting wages and wages at smaller companies; earnings at the upper end represent experienced workers at larger companies.

See "Occupational Employment and Wages for Selected Entry-Level Job Categories" later in this bulletin for earnings of other entry-level workers. Job descriptions are not provided for these occupations.

SOC Code Number	Occupation Title	Employment (1)	Wage Estimates		
			10 <sup>th</sup> Percentile Earnings	Median Earnings	90 <sup>th</sup> Percentile Earnings
	All Occupations/Jobs	5,235,876	12.90	18.79	28.34
<a href="#">17-2071</a>	Electrical Engineers	5,082	27.65	38.65	55.63
<a href="#">17-2072</a>	Electronics Engineers, Except Computer	2,189	27.60	38.67	53.46
<a href="#">17-2081</a>	Environmental Engineers	1,583	26.59	37.95	52.72
<a href="#">17-2141</a>	Mechanical Engineers	29,574	29.40	41.30	56.20
<a href="#">17-3013</a>	Mechanical Drafters	3,957	15.93	23.54	33.02
<a href="#">17-3023</a>	Electrical and Electronic Engineering Technicians	5,015	16.95	26.30	34.84
<a href="#">17-3025</a>	Environmental Engineering Technicians	594	15.35	22.05	30.80
<a href="#">17-3027</a>	Mechanical Engineering Technicians	4,353	17.43	25.70	35.20
<a href="#">49-2094</a>	Electrical and Electronics Repairers, Commercial and Industrial Equipment	1,904	16.04	26.40	33.80
<a href="#">49-9071</a>	Maintenance and Repair Workers, General	41,045	9.96	15.96	25.13
<a href="#">49-9043</a>	Maintenance Workers, Machinery	2,739	11.67	18.50	28.30
<a href="#">49-9098</a>	Helpers--Installation, Maintenance, and Repair Workers	2,523	8.43	12.12	19.02
<a href="#">51-1011</a>	First-Line Supervisors/Managers of Production and Operating Workers	23,380	17.11	27.91	42.82
<a href="#">51-2022</a>	Electrical and Electronic Equipment Assemblers	4,830	9.44	14.80	21.68
<a href="#">51-2023</a>	Electromechanical Equipment Assemblers	848	10.74	15.78	22.28
<a href="#">51-2031</a>	Engine and Other Machine Assemblers	3,112	16.15	25.38	31.99
<a href="#">51-2041</a>	Structural Metal Fabricators and Fitters	2,621	10.08	16.51	22.34
<a href="#">51-2092</a>	Team Assemblers	53,237	9.99	17.07	25.36
<a href="#">51-4011</a>	Computer-Controlled Machine Tool Operators, Metal	9,308	11.23	16.77	25.10

			Wage Estimates		
SOC Code Number	Occupation Title	Employment (1)	10 <sup>th</sup> Percentile Earnings	Median Earnings	90 <sup>th</sup> Percentile Earnings
	and Plastic				
<a href="#">51-4012</a>	Numerical Tool and Process Control Programmers	1,489	15.54	22.26	31.18
<a href="#">51-4021</a>	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	2,824	10.42	15.40	20.49
<a href="#">51-4031</a>	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	13,765	10.06	15.39	23.37
<a href="#">51-4032</a>	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1,620	12.11	16.83	23.00
<a href="#">51-4033</a>	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	3,790	11.74	17.07	24.68
<a href="#">51-4034</a>	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	2,151	12.06	19.16	26.03
<a href="#">51-4035</a>	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	1,229	11.70	17.31	23.11
<a href="#">51-4041</a>	Machinists	26,530	13.08	20.79	29.87
<a href="#">51-4072</a>	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	11,407	9.57	14.99	21.61
<a href="#">51-4111</a>	Tool and Die Makers	11,479	17.83	24.21	33.23
<a href="#">51-4121</a>	Welders, Cutters, Solderers, and Brazers	12,749	12.32	17.44	25.53
<a href="#">51-4122</a>	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	2,337	12.70	19.14	26.03
<a href="#">51-4194</a>	Tool Grinders, Filers, and Sharpeners	968	10.59	19.09	23.68
<a href="#">51-9061</a>	Inspectors, Testers, Sorters, Samplers, and Weighers	22,029	10.96	17.63	26.75
<a href="#">51-9111</a>	Packaging and Filling Machine Operators and Tenders	9,211	8.95	13.86	21.03
<a href="#">51-9121</a>	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	3,249	9.35	13.07	19.13
<a href="#">51-9198</a>	Helpers--Production Workers	16,066	8.72	11.52	17.22
<a href="#">53-1021</a>	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	4,168	14.32	20.40	33.86
<a href="#">53-1031</a>	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	5,008	14.58	25.87	42.80

			Wage Estimates		
SOC Code Number	Occupation Title	Employment (1)	10 <sup>th</sup> Percentile Earnings	Median Earnings	90 <sup>th</sup> Percentile Earnings
<a href="#">53-3031</a>	Driver/Sales Workers	11,260	8.10	10.06	16.81
<a href="#">53-3032</a>	Truck Drivers, Heavy and Tractor-Trailer	67,831	11.89	17.51	23.97
<a href="#">53-3033</a>	Truck Drivers, Light Or Delivery Services	28,264	8.86	13.53	25.34
<a href="#">53-7062</a>	Laborers and Freight, Stock, and Material Movers, Hand	68,823	8.83	12.30	19.42
<a href="#">53-7063</a>	Machine Feeders and Offbearers	2,597	9.78	14.95	21.96
<a href="#">53-7064</a>	Packers and Packagers, Hand	17,704	8.40	9.87	17.97

1) Estimates do not include self-employed workers.

To calculate annual wages multiply the hourly wage by a "year-round, full-time" hours figure of 2,080 hours.

Source: Economic Modeling Specialists Incorporated (EMSI), first quarter 2013 data.

## Occupational Employment and Wages for Selected Entry-Level Job Categories

Data for the following occupations are provided as a benchmark of wages for workers seeking entry level work not requiring much skill development. This provides a guide for manufacturers as to what types of wages are offered to entry-level lower-skilled workers in the region. Many manufacturers should consider these wage scales relative to the wages they offer entry-level workers.

SOC Code Number	Occupation Title	Employment (1)	Wage Estimates		
			10 <sup>th</sup> Percentile Earnings	Median Earnings	90 <sup>th</sup> Percentile Earnings
<a href="#">33-9032</a>	Security Guards	25,335	8.65	12.29	18.74
<a href="#">37-3011</a>	Landscaping and Groundskeeping Workers	41,580	8.27	10.84	15.02
<a href="#">37-2011</a>	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	97,230	8.32	11.07	16.89
<a href="#">43-5071</a>	Shipping, Receiving, and Traffic Clerks	18,270	10.01	15.17	22.53
<a href="#">47-2041</a>	Carpet Installers	1,835	9.34	15.02	19.99
<a href="#">47-2061</a>	Construction Laborers	35,033	9.44	14.06	20.08
<a href="#">47-5081</a>	Helpers--Extraction Workers	1,037	15.97	18.40	21.47
<a href="#">53-3033</a>	Light Truck or Delivery Services Drivers	28,364	8.86	13.53	25.34
<a href="#">53-6021</a>	Parking Lot Attendants	2,501	8.01	9.21	12.89
<a href="#">53-7081</a>	Refuse and Recyclable Material Collectors	3,838	9.09	13.85	20.68

1) Estimates do not include self-employed workers.

To calculate annual wages multiply the hourly wage by a "year-round, full-time" hours figure of 2,080 hours.

Source: Economic Modeling Specialists Incorporated (EMSI), first quarter 2013 data.

## Workforce Development Agency Contacts:

**Bob Sherer**, Manufacturing Talent Director, [shererr@michigan.gov](mailto:shererr@michigan.gov), 517.241.6099

**Rick Fisher**, Manufacturing Talent Specialist, [fisherr2@michigan.gov](mailto:fisherr2@michigan.gov), 517.241.8571

## Job Descriptions

Descriptions appear in the same order as the data in the tables on the previous pages.

**17-2071 Electrical Engineers** - Design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Exclude "Computer Hardware Engineers" (17-2061).

**17-2072 Electronics Engineers, Except Computer** - Research, design, develop, and test electronic components and systems for commercial, industrial, military, or scientific use utilizing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls. Exclude "Computer Hardware Engineers" (17-2061).

**17-2081 Environmental Engineers** - Design, plan, or perform engineering duties in the prevention, control, and remediation of environmental health hazards utilizing various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

**17-2141 Mechanical Engineers** - Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of such equipment as centralized heat, gas, water, and steam systems.

**17-3013 Mechanical Drafters** - Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.

**17-3023 Electrical and Electronic Engineering Technicians** - Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions. Exclude "Broadcast Technicians" (27-4012).

**17-3025 Environmental Engineering Technicians** - Apply theory and principles of environmental engineering to modify, test, and operate equipment and devices used in the prevention, control, and remediation of environmental pollution, including waste treatment and site remediation. May assist in the development of environmental pollution remediation devices under direction of engineer.

**17-3027 Mechanical Engineering Technicians** - Apply theory and principles of mechanical engineering to modify, develop, and test machinery and equipment under direction of engineering staff or physical scientists.

**49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment** - Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas. Exclude "Avionics Technicians" (49-2091), "Electronic Equipment Installers and Repairers, Motor Vehicles" (49-2096), and "Electrical and Electronics Installers and Repairers, Transportation Equipment" (49-2093).

**49-9042 Maintenance and Repair Workers, General** - Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. Exclude "Maintenance Workers, Machinery" (49-9043).

**49-9043 Maintenance Workers, Machinery** - Lubricate machinery, change parts, or perform other routine machinery maintenance. Exclude "Maintenance and Repair Workers, General" (49-9042).

**49-9098 Helpers-Installation, Maintenance, and Repair Workers** - Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties, such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.

**51-1011 First-Line Supervisors/Managers of Production and Operating Workers** - Supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Exclude team or work leaders.

**51-2022 Electrical and Electronic Equipment Assemblers** - Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering systems, electric motors, and batteries.

**51-2023 Electromechanical Equipment Assemblers** - Assemble or modify electromechanical equipment or devices, such as servomechanisms, gyros, dynamometers, magnetic drums, tape drives, brakes, control linkage, actuators, and appliances.

**51-2031 Engine and Other Machine Assemblers** - Construct, assemble, or rebuild machines, such as engines, turbines, and similar equipment used in such industries as construction, extraction, textiles, and paper manufacturing.

**51-2041 Structural Metal Fabricators and Fitters** - Fabricate, lay out, position, align, and fit parts of structural metal products.

**51-2092 Team Assemblers** - Work as part of a team having responsibility for assembling an entire product or component of a product. Team assemblers can perform all tasks conducted by the team in the assembly process and rotate through all or most of them rather than being assigned to a specific task on a permanent basis. May participate in making management decisions affecting the work. Team leaders who work as part of the team should be included. Exclude assemblers (51-2011 through 51-2099) who continuously perform the same task.

**51-4011 Computer-Controlled Machine Tool Operators, Metal and Plastic** - Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.

**51-4012 Numerical Tool and Process Control Programmers** - Develop programs to control machining or processing of parts by automatic machine tools, equipment, or systems.

**51-4021 Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend machines to extrude or draw thermoplastic or metal materials into tubes, rods, hoses, wire, bars, or structural shapes.

**51-4031 Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.

**51-4032 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend drilling machines to drill, bore, ream, mill, or countersink metal or plastic work pieces.

**51-4033 Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.

**51-4034 Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend lathe and turning machines to turn, bore, thread, form, or face metal or plastic materials, such as wire, rod, or bar stock.



**51-4035 Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend milling or planing machines to mill, plane, shape, groove, or profile metal or plastic work pieces.

**51-4041 Machinists** - Set up and operate a variety of machine tools to produce precision parts and instruments. Include precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures.

**51-4072 Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic** - Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.

**51-4111 Tool and Die Makers** - Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools.

**51-4121 Welders, Cutters, Solderers, and Brazers** - Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

**51-4122 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders** - Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Include workers who operate laser cutters or laser-beam machines.

**51-4194 Tool Grinders, Filers, and Sharpeners** - Perform precision smoothing, sharpening, polishing, or grinding of metal objects.

**51-9061 Inspectors, Testers, Sorters, Samplers, and Weighers** - Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.

**51-9111 Packaging and Filling Machine Operators and Tenders** - Operate or tend machines to prepare industrial or consumer products for storage or shipment. Include cannery workers who pack food products.

**51-9121 Coating, Painting, and Spraying Machine Setters, Operators, and Tenders** - Set up, operate, or tend machines to coat or paint any of a wide variety of products including food, glassware, cloth, ceramics, metal, plastic, paper, or wood, with lacquer, silver, copper, rubber, varnish, glaze, enamel, oil, or rust-proofing materials. Exclude "Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic" (51-4193) and "Painters, Transportation Equipment" (51-9122).

**51-9198 Helpers--Production Workers** - Help production workers by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate production occupation (51-1011 through 51-9199).

**53-1021 First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand** - Supervise and coordinate the activities of helpers, laborers, or material movers.

**53-1031 First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators** - Directly supervise and coordinate activities of transportation and material-moving machine and vehicle operators and helpers.

**53-3031 Driver/Sales Workers** - Drive truck or other vehicle over established routes or within an established territory and sell goods, such as food products, including restaurant take-out items, or pick up and deliver items, such as laundry. May also take orders and collect payments. Include newspaper delivery drivers. Exclude "Truck Drivers, Light or Delivery Services" (53-3033) and "Coin, Vending, and Amusement Machine Servicers and Repairers" (49-9091).

**53-3032 Truck Drivers, Heavy and Tractor-Trailer** - Drive a tractor-trailer combination or a truck with a capacity of at least 26,000 GVW, to transport and deliver goods, livestock, or materials in liquid, loose, or packaged form. May be required to unload truck. May require use of automated routing equipment. Requires commercial drivers' license.

**53-3033 Truck Drivers, Light Or Delivery Services** - Drive a truck or van with a capacity of under 26,000 GVW, primarily to deliver or pick up merchandise or to deliver packages within a specified area. May require use of automatic routing or location software. May load and unload truck. Exclude "Couriers and Messengers" (43-5021).

**53-7062 Laborers and Freight, Stock, and Material Movers, Hand** - Manually move freight, stock, or other materials or perform other unskilled general labor. Include all unskilled manual laborers not elsewhere classified. Exclude "Material Moving Workers" (53-7011 through 53-7199) who use power equipment. Exclude "Construction Laborers" (47-2061) and "Construction Trades Helpers" (47-3011 through 47-3019).

**53-7063 Machine Feeders and Offbearers** - Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.

**53-7064 Packers and Packagers, Hand** - Pack or package by hand a wide variety of products and materials.